

**What is claimed is:**

1. A method of transmitting information between a mobile node and a home agent of the mobile node, the mobile node having an associated home AAA server, the method comprising:

5       determining the address of the HAAA;

          contacting the HAAA and, responsively, receiving information indicating a methodology of determining the address of the home agent of the mobile node;

          determining the address of the home agent using information received from the HAAA and the PDSN; and

10       routing the information from the mobile node to the home agent having the address.

2. The method of claim 1 further comprising:

          moving the mobile node to a second network;

          re-determining the address of the HAAA;

15       re-contacting the HAAA and, responsively, receiving information indicating a methodology to determine the address of the home agent of the mobile node;

          re-determining the address of the home agent; and

          re-routing information to the home agent having the address.

20       3. The method of claim 1 wherein the message involves using a static address.

4. The method of claim 1 wherein the methodology involves obtaining an address from an address pool.

5. A system comprising:

5 a mobile node;

a wireless network coupled to the mobile node;

a PDSN coupled to the wireless network;

a proxy server coupled to the PDSN, the proxy server including a table, the table including information indicating the home address of the mobile node;

10 a HAAA coupled to the proxy server;

a home agent coupled to the PDSN;

wherein the mobile node sends a access-request message to the wireless network, and the wireless network sends the access-request message to the PDSN;

wherein the PDSN forwards the access-request to the proxy server;

15 wherein the proxy server determines the address of the HAAA;

wherein the HAAA receives the access-request message and, responsively, sends information representative of an IP address assignment to the proxy server, and the proxy server determines the address of the home agent using the information and the table; and

wherein a data message is thereafter routed to the home agent having the address.

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6. The system of claim 5 wherein the address of the home agent is determined statically.

7. The system of claim 5 wherein the address of the home agent is determined dynamically.

8. The system of claim 5 wherein the address is determined from an address pool.

9. The system of claim 5 wherein the network includes a PDSN.

10. The system of claim 5 wherein said mobile subsequently moves to a second network and the address of the HAAA and HA are re-computed.

11. A system for transmitting information between a mobile node and a home agent of the mobile node, the mobile node having an associated home AAA server, the system comprising:

means for determining the address of the HAAA;

means for contacting the HAAA and, responsively, receiving information indicating a methodology of determining the address of the home agent of the mobile node;

means for determining the address of the home agent using information received from the PDSN; and

means for routing the information from the mobile node to the home agent having the address.

5           12.     A computer readable medium having stored therein instructions for causing a processing unit to execute the following method:

              determining the address of the HAAA;

              contacting the HAAA and, responsively, receiving information indicating a methodology of determining the address of the home agent of the mobile node;

10           determining the address of the home agent using information received from the PDSN; and

              routing the information from the mobile node to the home agent having the address.

              13.     A computer program for transmitting information between a mobile node and  
15     a home agent of the mobile node, the mobile node having an associated home AAA server, comprising:

              first code for determining the address of the HAAA;

              second code for contacting the HAAA and, responsively, receiving information indicating a methodology of determining the address of the home agent of the mobile node;

20           third code for determining the address of the home agent using information received from the PDSN; and

fourth code for routing the information from the mobile node to the home agent having the address.

14. A method for tunneling data to a home agent of a mobile node from the mobile node, the home agent having an HAAA server, the mobile node coupled to a first network, the method comprising:

requesting a look-up methodology from the HAAA server of the home agent;  
responsively, receiving a look-up methodology from the HAAA server;  
determining the address of the home agent using a mapping table and the look-up methodology, the mapping table including a plurality of home agent addresses; and  
tunneling data to the home agent using the address of the home agent.

15. The method of claim 14 further comprising establishing said table.

16. The method of claim 14 further comprising:  
moving the mobile node to a second network;  
re-requesting a look-up methodology from the HAAA server of the home agent;  
responsively, re-receiving a look-up methodology from the HAAA server;  
re-determining the address of the home agent using a mapping table and the look-up methodology, the mapping table including a plurality of home agent addresses; and  
tunneling data to the home agent using the address of the home agent.

17. A computer readable medium having stored therein instructions for causing a processing unit to execute the following method:

requesting a look-up methodology from the HAAA server of the home agent;

5 responsively, receiving a look-up methodology from the HAAA server;

determining the address of the home agent using a mapping table and the look-up methodology, the mapping table including a plurality of home agent addresses; and

tunneling data to the home agent using the address of the home agent.

10 18. A computer program for tunneling data between a mobile node and a home agent, comprising:

first code for requesting a look-up methodology from the HAAA server of the home agent;

second code for responsively, receiving a look-up methodology from the HAAA server;

15 third code for determining the address of the home agent using a mapping table and the look-up methodology, the mapping table including a plurality of home agent addresses; and

fourth code for tunneling data to the home agent using the address of the home agent.

19. A system for tunneling data to a home agent of a mobile node from the mobile node, the home agent having an HAAA server, the mobile node coupled to a first network, the system comprising:

means for requesting a look-up methodology from the HAAA server of the home  
5 address of the mobile node;

means for, responsively, receiving a look-up methodology from the HAAA server;

means for determining the address of the home agent using a mapping table and the look-up methodology, the mapping table including a plurality of home agent addresses; and

means for tunneling data to the home agent using the address of the home agent.  
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20. A system for reclaiming and releasing session resources on a PDSN, proxy server and home agent during packet data serving area traversal, the system comprising:

means for requesting a reclamation of resources on the PDSN by the proxy server, upon detection of traversal of the mobile node from a first coverage area to a second  
15 coverage area;

means for, responsively, receiving a resource management from the PDSN;

means for acknowledging the resource management request with a resource-free-response by the proxy server to the PDSN;

means for releasing resources allocated to a PDSN session from the home agent, by  
20 the PDSN; and

means for responding to the de-RRQ messaging triggered by resource management,  
with a de-RRP message.

McDonnell Boeheim